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Travel time on a given highway section is the time taken to traverse that section from upstream to downstream. It has become a useful parameter utilized by both planners as well as road users in evaluating the operational performance of highways and intersections (level of service). However, travel time on a highway is bound to be influenced by external factors especially the traffic flow properties and hence it is commonly expected that as flow on a given road section increases the travel time is bound to be increased until a certain point; capacity. This study was conducted by cordoning Skudai town along natural and artificial boundaries and selecting four road sections to represent the study area. Estimating travel time on these sections using the Bureau of Public Roads (BPR model) equation with additional factor of delay added. The free flow travel time was estimated from spot speed studies carried out during off peak period which normally yields time mean speed (but was converted to space mean speed). Also volume studies was conducted simultaneously with spot speed studies during morning and evening peak hours and capacity was estimated using selected maxima method. From the result of the analysis it shows drivers on these roads normally exceeds the speed limits using 85th percentile speed and all of these roads operates at higher level of service during morning commute than evening commute. Travel time on all these roads increases as volume to capacity ratio increases keeping free flow travel time and other coefficients constant. By percentages, average travel time increases from very insignificant value to about 9.8%